

REMARKS

Claims 1, 2 and 4 are now pending in this application. In response to the Office Action, dated August 25, 2003, claim 1 has been amended and claim 8 has been cancelled. Favorable reconsideration of the application as amended is respectfully solicited.

Claim 8 was rejected under the first paragraph of 35 U.S.C. § 112. As this claim has been cancelled, the rejection is now moot.

Claims 1, 2, 4 and 8 were rejected under the second paragraph of 35 U.S.C. § 112 on the basis that the claimed phrase "cross-sectional width" is unclear. Claim 1, the only independent claim, has been amended to delete this phrase and to clarify the dimensional relationships recited. Claim 1 expressly recites that the first impurity region portion is approximately equal in width to the internal diameter of the connection hole and the width of the second impurity region portion is substantially greater than the internal diameter of the connection hole. It is submitted that now pending claims 1, 2 and 4 fully comply with the requirements of 35 U.S.C. § 112. Withdrawal of the rejection is respectfully solicited.

Claims 1, 2 and 4 have been rejected further under 35 U.S.C. § 103. as being unpatentable over the prior art disclosure illustrated in Fig. 15, in view of Kuroda, of record. Kuroda has been again relied upon solely for disclosing an anti-HF side wall film not etched by hydrofluoric acid. The claimed width relationships of the first and second impurity region portions were held to be met by Fig. 15. Page 5 of the Office Action states that Fig. 15 shows a lower impurity region portion having a smaller cross-sectional width than the width of a higher impurity region portion.

As pointed out above, claim 1 has been amended to recite that the first impurity region portion is approximately equal in width to the internal diameter of the connection hole and the width of the second impurity region portion is substantially greater than the internal diameter of the connection hole. This relationship is illustrated in Fig. 1; as shown, a person of ordinary skill in the art would have taken the width of region 52 to be close, if not equal, to the width of the internal diameter of the connection hole. The internal diameter of the connection hole is the distance between walls of the hole as seen in the cross-section of the figure. Thin film 51 is a covering on the walls but does not affect the inner diameter of the hole wall.

In the prior art Fig. 15 there is no impurity region portion that, by comparison, is approximately equal in width to the connection hole diameter. The claim, as amended, thus recites features that distinguish between the two impurity region portions that are not disclosed in Fig. 15. It is submitted, therefore, that claim 1 and its dependent claims 2 and 4 are patentably distinguishable over the prior art.

Allowance of the application is therefore respectfully solicited. To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper,

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including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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A handwritten signature in black ink that reads "Gene Z. Robinson". The signature is written in a cursive, flowing style.

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Date: November 20, 2003